

**EVALUATION OF THE CONTENT AND THE
USABILITY OF LOWER SECONDARY SCHOOL
SCIENCE COURSEWARE**

CHE SALMIAH CHE COB

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EVALUATION OF THE CONTENT AND THE USABILITY OF LOWER SECONDARY SCHOOL SCIENCE COURSEWARE

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CHE SALMIAH CHE COB

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ABSTRAK

Laporan ini membentangkan hasil projek penyelidikan yang menilai kandungan dan kebolehgunaan perisian kursus Sains Menengah Rendah yang dibekalkan Kementerian Pelajaran Malaysia. Tujuan utama kajian ini adalah untuk mengetahui samada kandungan perisian kursus tersebut bersesuaian dengan sukatan matapelajaran. Selain itu, kebolehgunaan perisian juga dinilai merangkumi elemen-elemen kebergunaan seperti interaktiviti, navigasi, paparan skrin, dan maklumbalas. Aspek kemampuan belajar juga dinilai. Metodologi kajian kes dipilih di dalam kajian ini. Ia melibatkan enam fasa- mendefinisi soalan kajian, memilih kes dan teknik menganalisa data, persediaan mengumpul data, menilai dan menganalisa data dan akhir sekali menyediakan laporan. Guru-guru ditinjau untuk mengenalpasti pandangan mereka terhadap kandungan dan kebolehgunaan perisian kursus tersebut. Hasil analisa data menunjukkan kandungan perisian menepati sukatan pelajaran Sains dan guru-guru terlibat memberikan respon positif dari segi kebolehgunaan serta memberikan beberapa cadangan untuk meningkatkan kebolehgunaan perisian kursus tersebut. Secara umumnya mereka berpuashati dan mendapati perisian kursus tersebut menarik.

ABSTRACT

The report presents the result of the evaluation of the contents and usability of the lower secondary science courseware which is provided by Malaysian Ministry of Education. The study is to know whether the contents of the courseware are reliable to the syllabus. The usability of the courseware is also evaluated in aspects of interactivity, navigation, screen appearance, feedback, and, technical aspects and update process. The aspect of learnability is also evaluated. The case study methodology has been chosen in carrying out the research. It involves six steps which are to determine and define the research questions, select the cases and determine data gathering and analysis techniques, prepare to collect the data, collect the data in the field, evaluate and analyze the data and lastly prepare the report. Teachers are surveyed to determine their responses and the analysis shows that the teachers determine that the contents of the courseware is reliable to the syllabus and they give positive responses on the aspects of usability and provide some suggestions to enhance the usefulness of the courseware. Teachers also subjectively satisfy and find the courseware interesting.

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CHAPTER ONE

PROJECT BACKGROUND

1.1 Introduction

With the increasing demands of information age, computer technology plays an important role in education. The school's teaching and learning material, for instance, educational software or courseware has been designed to fulfill the needs and to support the new teaching and learning technology.

Many educators have begun to show an interest in this technology and what it can do for their students in the classroom. There is a great deal of documentation which suggests that certain software packages can enhance acquisition of skills through drill and practice (Kulik et al., 1985; Roblyer, 1988). Increased achievement scores, reductions in necessary learning times, and improved attitudes towards instruction are all the results of such software. It has also been documented that technology can support a more constructivist approach to learning (Means & Olson, 1997).

In Malaysian scenario, the educational software is rapidly moving into the mainstream of teaching and learning process in primary and secondary schools. More and more teachers are using courseware as an integral part of the subjects they teach. Indeed, this particular electronic learning aid may provide certain advantages over conventional teaching methods. However, the materials should challenge the student's cognitive, attractive, and the materials must have the ability to motivate student to learn and to encourage student participation.

Pawling (1999) states that CD-ROM (courseware) is potentially a liberating instrument for the teachers and learners alike in that it has the special facility of incorporating practice in all language skill in a multimedia package using video, text, photograph and

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